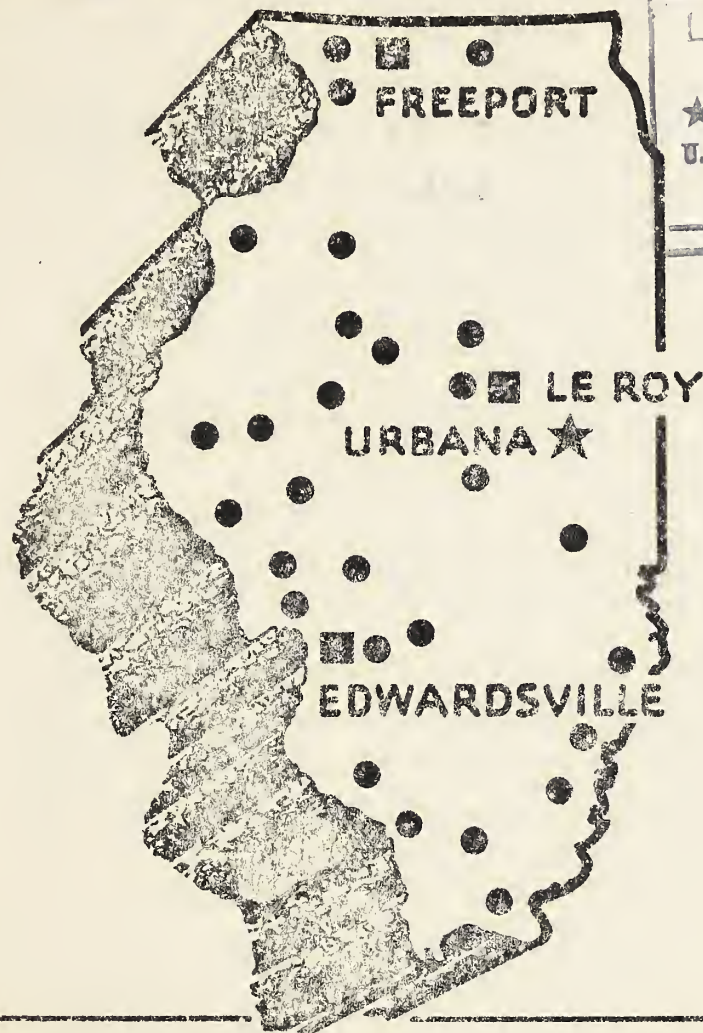


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The ILLINOIS COOPERATOR



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U. S. Department of Agriculture

LOCATION OF DEMONSTRATION PROJECTS ■
AND ASSOCIATED CAMPS ●

U.S. DEPT. OF AGRICULTURE
SOIL CONSERVATION SERVICE
OCTOBER-NOVEMBER 1936

The Soil Conservation Service ILLINOIS COOPERATOR is issued occasionally for the benefit of those interested in the erosion control program in Illinois. Its purpose is to serve cooperators and others by giving them the benefit of information regarding methods, which information is gathered from all parts of the state by technicians in the course of their work in furthering the erosion control program.

R. E. Uhland, Regional Conservator
Upper Mississippi Valley Region #5
Illinois, Iowa Minnesota, Missouri, and Wisconsin
Headquarters, Des Moines, Iowa

F. A. Fisher, State Coordinator
Headquarters, Urbana, Illinois

SOIL CONSERVATION

IN ILLINOIS

The Soil Conservation Service is cooperating with the College of Agriculture, the Agricultural Adjustment Administration, and other agencies interested in conserving the soils.

Cooperative plans are being worked out to spread the demonstration methods of erosion control developed in the 28 CCC Soil Conservation Service camps and three project areas into many more counties of the State. This will make it possible for every farmer, with the use of some technical guidance, to apply erosion control practices to his own farm.

An excellent program has been carried on in this field through the College Extension Service for many years. The educational groundwork already laid by the Extension Service has made farm owners and operators very receptive to the expanded program for conserving the soils which has developed in the state during the last three years.

The largest problem is to show, through demonstrations, the most practical methods of erosion control so that more general use can be made of available information.

--F. A. Fisher, State Coordinator

FARMER COOPERATION

Three farmers near LeRoy in McLean county, William Devine, H. M. Scott, and Charles Washburn, are doing a typical job of cooperating with each other as well as with the Soil Conservation Service in controlling erosion on a small watershed which is common to their three farms.

Approximately 75 acres drains over the lower of two concrete dams put in to check gully erosion. More than half of the 75 acres is terraced and an adapted crop rotation has been worked out for the cultivated portion of the watershed, which is to be farmed on the contour. Alfalfa and grasses occupy more than half of the area.

The upper dam forms a pond which will be used for a stock water supply by Mr. Devine, owner of the upper farm, and by Mr. Scott, owner of the middle farm. Mr. Devine furnished more than half of the material for the dam which is located on land belonging to Mr. Scott. Mr. Scott furnished a portion of the material for the upper dam as well as more than half the material for the lower dam which is located on Mr. Washburn's land. Mr. Washburn furnished considerable of the material needed for the lower dam.

In addition to reducing erosion, the two dams help protect a valuable tile line from washing out.

From the measures these three neighbors are taking to reduce erosion, it is evident that the cooperation goes further than merely furnishing material for the structures. By rotating crops, growing legumes and grasses, and by having the land terraced, silting up of the ponds formed by the dams will be reduced to a minimum. What is perhaps more important is that the topsoil will be kept on the fields where it can be used to grow crops.

CONTOUR FARMING

** Dakota, Illinois, September 15, 1936*

In reply to your request for my opinion about the merits of contour farming, and my approval or objections to it, I take pleasure in giving you the following observations after a season's experience with contour work. I have made a study of soil improvement and soil building for many years and wherever I had the means I followed suggestions to build up soil fertility. Our difficulty has always been to hold that fertility from getting away faster than the crops would consume it. I was well aware of the fact that erosion played a major part in the loss of this fertility.

After much study and reading of many articles written by men who have had considerable experience and success in solving their erosion difficulties with contour farming and terracing, we became interested in the Soil Conservation Service program. After several consultations regarding the program, the type of farming, and the changes to be made, with the approval of my landlord we entered into the program. Our soil is rather level to gently rolling with just enough decline to run off excess water. Thus we have considerable sheet erosion when rains are heavy.

If we would lose only $\frac{1}{4}$ inch of soil every year by sheet erosion, and I think that is putting it very low for the average farm, that would make one inch in four years. That is so slow that nobody would detect it, yet it would take nature about four hundred years to rebuild that inch of lost soil. That is something to think about.

After due consideration we followed the Service's recommendations to contour and strip farm those portions that showed considerable sheet erosion after heavy rains. I find many people have a very erroneous idea about the Soil Conservation Service. They don't know that the Soil Conservation Service program is a soil building program designed to stop the loss of fertility by erosion, to increase the moisture holding ability of the soil by sweetening it with limestone, and growing legumes to add nitrogen and humus to the soil to increase its



fertility and water-holding ability. All these things are greatly favored and assisted by contour work, for contour farming is nothing more than farming on the level. When asked if plowing, planting, or cultivating corn gave us any difficulty in our contour work, frankly I say no. Plowing may take a little longer but it makes a better job when your plows are on the level than when they lean one way going up grade and the other way when going down. It may be a little difficult at the beginning to make some of the changes when one is not experienced, but after a half day's work when you get accustomed to the method, there is no difficulty.

Regarding the cultivation of corn, we use a two-row plow and have not the least trouble in plowing as close or as well as one does when plowing checked corn. In

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reference to the use of tractor for cultivating I would frankly say I prefer tractor cultivation to horses, and there is not the least difficulty following the rows closely with a tractor.

As to the conservation of moisture, you can send anybody here after a heavy rain and I can show him where the rows have been standing level full of water and it all seeped into the soil where it fell and only seldom does any ever get across to the next row. On our farm we use both contour and strip farming. In the event of excessive rainfall where the contour work would not hold the water the strip of grain or alfalfa will catch and hold any surplus water or soil carried by it. Thus this system is solving the great difficulty we experienced in holding soil and fertility from getting away faster than it was consumed by the crops.

In regard to any saving of fuel or power in contour farming, I would say there is. Anyone can judge for himself whether it is easier to pull machinery on the level or pull it up and down grade all day.

Trusting this will give you my view about contour farming,

--C. D. Goete

SANGAMON RIVER PROJECT

McLEAN AND FORD COUNTIES

LeRoy, Illinois — The oldest and largest Soil Conservation Service demonstration area in Illinois is located on the Sangamon River watershed in McLean and Ford counties.

The Sangamon River project was established in the fall of 1933. Since that time extensive changes have been made in land use to aid in reducing erosion.

Much of the area is fairly level to gently rolling land of the best kind. On the better land, sheet erosion with the resultant removal of a thin sheet of soil is the major problem. Because sheet erosion is harder to recognize than gully erosion and because the land is good enough to encourage an intensive type of farming, much plant food has been removed from even the best farms. Small portions of the demon-

stration area are quite rough so that the more spectacular gully erosion is common.

The erosion control program on the Sangamon River area includes a demonstration of nearly all known types of erosion control methods. Among the methods demonstrated on this area are terracing with contour farming, contour farming, strip cropping, vegetated waterways, permanent and temporary check dams, soil treatments with lime and fertilizer, several different adapted crop rotations, woodlot improvement, and wildlife management.

One of the important features of the work done by the staff at LeRoy is conducting tours and guiding interested persons and groups over the demonstration area. Landowners and farm operators who desire to study erosion control methods and learn how various methods compare under field conditions can spend some very profitable days on the demonstration area.

—G. M. Flint, Project Manager

FREEPORT PROJECT

Stephenson County

Freeport, Illinois — The Freeport area was established early in the fall of 1935 and during the year of operation, terracing strip cropping, contour farming, woodlot improvement, and wildlife management demonstrations have been established, permanent and temporary check dams constructed, and soil conserving rotations introduced.

Soil treatments of limestone and demonstrations with fertilizer are also an important part of the program at Freeport.

Fortunately, limestone is available almost anywhere in the area. This has made it possible to use portable pulverizers and has reduced the amount of hauling necessary to get the agricultural limestone to the fields where it is to be used. Legume crops do well after the soil has been treated with lime and most of the farmers are familiar with the advantages of legume crops and are able to utilize these crops to the best advantage with dairy or beef cattle.

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The Freeport area has the lowest percentage of land in cultivated crops of the three Illinois demonstration areas. The topography varies from gently rolling to rolling and the degree of erosion is somewhat less than usually found under similar conditions, due to the pasture-livestock type of farming. However, even with the protective cover afforded by the pasture lands, a great deal of soil has been lost and a number of serious gullies have developed. Landowners and operators within the demonstration area have shown their willingness to cooperate in the program by entering into agreements and by following the program outlined in the agreements, as worked out by the technical men.

The Freeport area will provide demonstrations where farmers of northern Illinois can study erosion control practices adapted to actual field conditions such as exist on their own farms.

—Carl R. Olson, Project Manager

EDWARDSVILLE PROJECT

MADISON COUNTY

Edwardsville, Illinois—The Edwardsville demonstration area was started about a year ago and a great deal of progress has already been made in demonstrating erosion control methods. The complete erosion control program is being demonstrated and nearly all methods adapted to the area are now in use.

Upland topography varies from gently to steeply rolling. The soils within the Edwardsville area are quite susceptible to erosion, especially when the organic matter content is lowered by cropping.

Farmer cooperation is excellent and most of the farmers are quite willing to make the changes in crop rotations and methods of farming necessary to control erosion and build up the productivity of their land.

—C. E. Swain, Project Manager

CAMP HOLDS OPEN HOUSE

The open house held at Camp Wheeler, Edwardsville, was attended by approximately

1,000 people, according to Mearle E. Harper, superintendent.

The program for the day included a tour of inspection of the camp buildings, music by the local WPA band, and talks by I. W. May, Madison county farm adviser, Captain Goff, company commander, and F. A. Fisher, state coordinator for Illinois. The speakers presented figures showing progress made by the camp in its erosion control program.

The Madison County Soil Conservation Association was well represented and a part of the program was devoted to Association activities.

EROSION CONTROL REDUCES FLOOD

A. H. Bennett, chief of the Soil Conservation Service, tells how good farming practices help to prevent flood damage.

Near Stillwater, Oklahoma, are 3 streams. During and right after heavy rains, 2 of the streams ran high over their banks, but the third stream did not overflow its normal banks.

The rainfall was practically the same in the watersheds of all 3 of the streams. They drained the same kind of land, and the farmers grew about the same kind of crops. But nine-tenths of the land on the watershed that did not overflow its banks had been carefully handled by farmers to check soil erosion and conserve water by helping it to sink into the ground. One of the other watersheds had not been given any protection and on the other watershed only 15 percent of the land had been protected with erosion control and water conserving measures.

SOIL CONSERVATION ASSOCIATIONS

IN ILLINOIS

The total membership of the soil conservation associations in Illinois is 1,193. Sixty-two counties are represented in the associations, and equipment to the amount of 4 tractors, 10 terracers, and 3 crushers is owned, while 10 tractors, 3 terracers, and 11 crushers are leased. The majority of the associations are cooperating with a CCC camp under the supervision of the Soil Con-

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ILLINOIS SOIL CONSERVATION ASSOCIATIONS

servation Service. The College of Agriculture, University of Illinois, and the Extension Service are cooperating with these associations and with the Soil Conservation Service in the erosion control program in the state. The membership of these associations is among farmers and others interested in the soil erosion control program.

The following enumeration of the activities of the associations is taken from the latest available figures reported by them. In many cases additional work has been done and other erosion control practices are being used.

The Adams County Soil Conservation Association has 31 members, owns a terracer, and leases a lime crusher and tractor. Members have built 15.6 miles of terraces and crushed 291 tons of agricultural limestone.

The Carroll Association has 22 members from Carroll and Whiteside counties. Two lime crushers are leased and 1,495 tons of agricultural limestone have been produced. About 6.2 miles of terracing has been done.

The Charleston Association has 15 members from Coles and Cumberland counties. The association pays the expenses of operating quarrying and terracing equipment. A total of 9 miles of terraces and 904 tons of limestone have been made possible under the arrangement.

Twenty-five members from White, Hamilton, and Gallatin counties belong to the Egyptian Soil Conservation Association. The association leases a tractor and terracer and members have built nearly 30 miles of terraces.

The Elmwood Association has 27 members from Peoria and Knox counties. The association owns a lime pulverizer with which it has produced 1,769 tons of agricultural limestone. The Elmwood camp has cooperated with members in building a mile and a half of terraces.

The Galesburg District Association with 45 members from Knox, Warren, and Mercer counties is cooperating with the camp at Galva.

The Greenville Association has 42 members from Bond, Fayette, Clinton, and Montgomery counties. The association owns a hoist, quarry cars, and a lime spreader, and

rents a tractor, a terracer, and a rotary scraper. A total of 15.6 miles of terracing has been done by association members.

The Henry County Association, cooperating with the Soil Conservation Service camp at Galva, has 7 members and had aided in the construction of 6.8 miles of terraces.

The Jackson Association has 28 members from Jackson and Union counties. A terracer is owned and a tractor is leased. The association equipment has been used in building about 42 miles of terraces on the farms of members.

The Jerseyville Association has 60 members from Jersey county, and leases a tractor, a terracer, and a one-yard scraper. The terracing program so far has amounted to 18.4 miles of terraces. A total of 558 tons of limestone have been crushed.

The Jo Daviess County Association leases two lime crushers and has a membership of 22. Terraces totaling 2.4 miles have been built and 242 tons of limestone have been produced.

The Marshall-Putnam Association has 20 members from these two counties and owns a tractor and terracer for the use of its members. A total of 22.6 miles of terraces have been built for members.

The 30 members of the Macoupin Association lease a limestone crusher. A little less than a mile of terraces have been built on the farms of members.

The crushing of 183 tons of limestone and the construction of 7.3 miles of terraces are the activities reported by the Madison County Association. This association has 37 members.

The McDonough Association has 31 members in McDonough, Warren, Fulton, and Hancock counties. The association owns a crusher with which they have pulverized 1,200 tons of limestone, and about 4 miles of terracing has been done.

Fifty-five members from McLean, DeWitt, and Platt counties make up the McLean Association. The terracing program includes 7.2 miles of terraces on the farms of members.

The Mercer Association has 24 members from Mercer, Rock Island, and Henderson counties. A tractor and lime crusher are leased, and 264 tons of agricultural lime-

(Continued on next page)

stone have been produced. A total of 7 miles of terraces have been built.

A tractor and a lime crusher are leased by the 27 members of the Morgan Association, which draws its membership from Cass, Morgan, and Scott counties. Sixty-eight tons of agricultural limestone have been produced and 11.7 miles of terraces have been built.

The Ogle County Soil Conservation Association has 9 members and 2,100 feet of terracing has been done.

Okaw Valley Soil Conservation Association has 26 members from Randolph and St. Clair counties. The association owns a tractor and two terracers. A total of 21.5 miles of terracing has been done on the farms of members.

The Pike County Association has 119 members. A member of the association has a terracer. Members of the association have terraces amounting to 23.3 miles and 259 tons of agricultural limestone have been produced.

The R. C. L. W. Association with 60 members from Richland, Crawford, Lawrence, and Wabash counties has cooperated in the building of 6.4 miles of terracing.

The Rushville District Association in Schuyler and Brown counties has 64 members, owns a terracing machine, and leases a crusher and 2 tractors. Agricultural limestone amounting to 1,400 tons has been produced and terraces totaling 30.8 miles have been built.

The Sangamon Valley Terracing Club has 70 members and owns a tractor and terracing machine. The membership comes from Macon, Sangamon, DeWitt, Christian, Logan, Shelby, and Piatt counties and the members have a total of 26 miles of terraces and 3,038 tons of limestone have been produced.

The Stark County Association has 9 members and is cooperating with the camp at Galva.

The Stephenson County Association has 23 members and leases a lime crusher with which 198 tons of agricultural limestone have been produced.

The Tazewell Soil Conservation Association has 50 members, owns a tractor and a terracing machine, and has made possible 12 miles of terraces on farms of its members.

The Wabash Valley Soil Improvement and Conservation Association has 17 members in

Edwards, White, Wabash, and Wayne counties. This association reports 8.4 miles of terraces.

The Williamson Association has 38 members in Williamson, Franklin, and Johnson counties. The association owns a tractor and two terracing machines. The terracing program amounts to 17.5 miles of terraces in the farms of members.

The Winnebago County Association leases a crusher and has 10 members. A total of 14 tons of agricultural limestone has been produced and 15.2 miles of terracing done.

The Woodford County Soil Conservation Association has a membership of 25, and 5.8 miles of terracing has been done.

The association in Mason county has a membership of 6. Terracing amounting to 6.2 miles has been completed.

Membership in an association is necessary before a cooperative agreement to carry out a soil conservation demonstration on a farm is entered into by a CCC camp or a demonstration project.

The object for which these associations were organized is to unite the farmers of Illinois for their mutual cooperation in procuring the necessary help, equipment, instruction, and facilities for terracing and liming their land and for the prevention of soil erosion. The associations own equipment for building erosion control structures and producing agricultural limestone and rent equipment or supply limestone to members at nominal charges.

All but four of the associations are incorporated under the laws of the State of Illinois as non-profit corporations, and in this capacity they are subject to the filing of an annual report, payment of income and sales tax, and other such obligations as specified by the laws of Illinois. The associations have been charged with the responsibility of assisting in the promotion and formulation of a successful soil conservation program in their respective communities, to assist in the purchase or rental of equipment for crushing limestone and the construction of terraces, and to aid in any other way in the successful formulation and execution of a complete, sound, coordinated soil erosion control program.

—H. L. Buckner, Associate Agronomist

LEGUMES REDUCE EFFECT OF DROUGHT

Legumes and grasses have helped reduce the effect of the 1933 drought, according to reports made by specialists from the University of Illinois College of Agriculture.

A. R. Grindley, Champaign county farmer, reported harvesting a good crop of clover this year and pointed out that the clover yielded him more returns than the land would have yielded had it been planted to corn.

NEW BULLETIN DISCUSSES TERRACING

"The maintenance of a fertile, productive soil is the first requirement of a prosperous and permanent agriculture," according to E. W. Lehmann and R. C. Hay in their circular "Terraces to Save the Soil" just issued by the University of Illinois College of Agriculture.

Mr. Lehmann is Chief in Agricultural Engineering, and Mr. Hay is Extension Specialist in Agricultural Engineering.

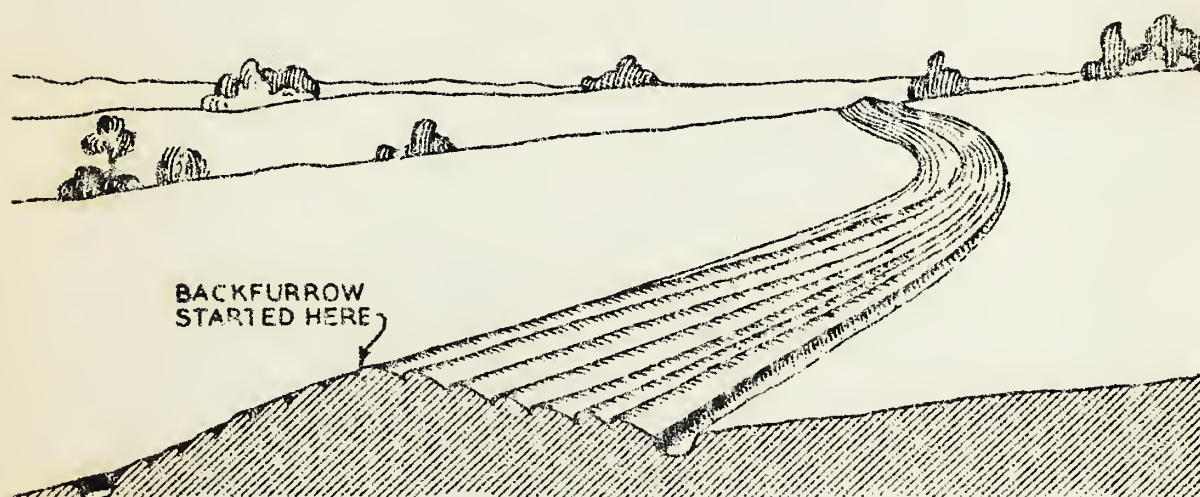
The circular covers the subject of terracing in Illinois and information as to the importance of terracing as a measure to reduce erosion is given. Methods of planning a terrace system, as well as precautions to be taken in locating terrace outlets and final construction of the terraces and outlets are clearly described.

They point out that "the productive power of 18 million acres of Illinois land is rapidly dwindling because of erosion. Gullies are forming, and every year more land is abandoned so far as farming is concerned. The greatest single cause of loss of fertility on this land, which includes a large area of the rolling land of the state, is soil erosion."

The circular discusses the use of different machinery for terrace construction including equipment which may be built on the farm: for example, V-draws and V-ditchers, and equipment such as road graders, blade terracers, the whirlwind terracer, and the elevating grader terracer.

Proper maintenance of the terrace system after it is built and in operation is also discussed in the circular. Methods of plowing to maintain terraces are discussed and illustrated. It is pointed out that terraced land is not difficult to farm and the experimental data showing the soil saving possible by using terraces are quoted.

The circular is adequately illustrated and will be of value to any farmer who is farming terraces or who desires to build a terrace system on his farm to protect his soil. The circular may be obtained from the University of Illinois, College of Agriculture, at Urbana, by asking for Circular 459, "Terraces to Save the Soil."



A Terrace Ridge Plowed by Backfurrowing to the Center of the Ridge.
FROM ILLINOIS CIRCULAR NO. 459

U. S. DEPARTMENT OF AGRICULTURE
Soil Conservation Service
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